

FIGURE 1

1	ATGTCAGTGGGAGCCATGAAGAGGGAGTGGGGAGGGCAGTTGGGCTTGGAGGGGCGAGC	60
61	GGCTGCCAGGCTACGGAGGAAGACCCCTTCCCGACTCGGGGCTTGCCTCCGGGACAA	120
121	GGTGGCAGGCGCTGGAGGCTGCCCGAGCCTGCCGTGGGTGGAGGGGAGCTCAGCTCGGTTG	180
181	TGGGAGCAGGCGACCGGCACTGGCTGGATGGACCTGGAAGCCTCGCTGCTGCCACCTGGT	240
241	CCCAATGCCAGCAACCTCTGATGGCCCCGATAACCTCACTTCAGCAGGATCACCTCCT	300
301	CGCACGGGAGCATCTCCTACATCAACATCATCATGCCCTTCGGTGTTCGGCACCATCTGC	360
361	CTCCTGGGCATCATCGGGAACCTCCACGGTCATCTTCGGGTCGTGAAGAGTCCAAAGCTG	420
421	CACTGGTGCAACAACGTCCCCGACATCTTCATCATCAACCTCTCGGTAGTAGATCTCCTC	480
481	TTTCTCCTGGGCATGCCCTTCATGATCCACCAGCTCATGGGCAATGGGGTGTGGCACTTT	540
541	GGGAGAGCCATGTGCACCCCTCATCACGGCCATGGATGCCAATAGTCAGTTCACCAGCACC	600
601	TACATCCTGACCGCCATGGCCATTGACCGCTACCTGGCCACTGTCCACCCCATCTCTTCC	660
661	ACGAAGTTCCGGAGCCCTCTGTGGCCACCCCTGGTGATCTGCCCTCCTGTGGGCCCTCTCC	720
721	TTCATCAGCATCACCCCTGTGTGGCTGTATGCCAGACTCATCCCTTCCCAGGAGGTGCA	780
781	GTGGGCTGCGGCATACGCCCTGCCCAACCCAGACACTGACCTCTACTGGTTTACCCCTGTAC	840
841	CAGTTTTCCTGGCCTTTGGCCTTGCCCTTTGTGGTCATCACAGCCGCATACGTGAGGATC	900
901	CTGCAGCGCATGACGTCCCTCAGTGGCCCCCGCCTCCAGCGCAGCATCCGGCTGCGGACA	960
961	AAGAGGTGACCCGACAGCCATCGCCCATCTGTCTGGTCTTCTTTGTGTGTGGGCACCC	1020
1021	TACTATGTGCTACAGCTGACCCAGTTGTCCATCAGCCGCCCGACCCCTCACCTTTGTCTAC	1080
1081	TTATACAATGCGGCCATCAGCTTGGGCTATGCCAACAGCTGCCTCAACCCCTTTGTGTAC	1140
1141	ATCGTGCTCTGTGAGACGTTCCGCAACGCTTGGTCTGTGGTGAAGCCTGCAGCCCCAG	1200
1201	GGGCAGCTTCGGCCTGTGAGCAACGCTCAGACGGCTGACGAGGAGGAGACAGAAAGCAA	1260
1261	GGCACCTGA	1269

FIGURE 2

1	M	S	V	G	A	M	K	K	G	V	G	R	A	V	G	L	G	G	G	S	20
21	G	C	Q	A	T	E	E	D	P	L	P	D	C	G	A	C	A	P	G	Q	40
41	G	G	R	R	W	R	L	P	Q	P	A	W	V	E	G	S	S	A	R	L	60
61	W	E	Q	A	T	G	T	G	W	M	D	L	E	A	S	L	L	P	T	G	80
81	P	N	A	S	N	T	S	D	G	P	D	N	L	T	S	A	G	S	P	P	100
101	R	T	G	S	I	S	Y	I	N	I	I	M	P	S	V	F	G	T	I	C	120
121	L	L	G	I	I	G	N	S	T	V	I	F	A	V	V	K	K	S	K	L	140
141	H	W	C	N	N	V	P	D	I	F	I	I	N	L	S	V	V	D	L	L	160
161	F	L	L	G	M	P	F	M	I	H	Q	L	M	G	N	G	V	W	H	F	180
181	G	E	T	M	C	T	L	I	T	A	M	D	A	N	S	Q	F	T	S	T	200
201	Y	I	L	T	A	M	A	I	D	R	Y	L	A	T	V	H	P	I	S	S	220
221	T	K	F	R	K	P	S	V	A	T	L	V	I	C	L	L	W	A	L	S	240
241	F	I	S	I	T	P	V	W	L	Y	A	R	L	I	P	F	P	G	G	A	260
261	V	G	C	G	I	R	L	P	N	P	D	T	D	L	Y	W	F	T	L	Y	280
281	Q	F	F	L	A	F	A	L	P	F	V	V	I	T	A	A	Y	V	R	I	300
301	L	Q	R	M	T	S	S	V	A	P	A	S	Q	R	S	I	R	L	R	T	320
321	K	R	V	T	R	T	A	I	A	I	C	L	V	F	F	V	C	W	A	P	340
341	Y	Y	V	L	Q	L	T	Q	L	S	I	S	R	P	T	L	T	F	V	Y	360
361	L	Y	N	A	A	I	S	L	G	Y	A	N	S	C	L	N	P	F	V	Y	380
381	I	V	L	C	E	T	F	R	K	R	L	V	L	S	V	K	P	A	A	Q	400
401	G	Q	L	R	A	V	S	N	A	Q	T	A	D	E	E	R	T	E	S	K	420
421	G	T																		422	

FOUO 50 27 55 50

FIGURE 3

1	M S V G A M K K G V G R A V G L G G G S	20
21	G C Q A T E E D P L P D C G A C A P G Q	40
41	G G R R W R L P Q P A W V E G S S A R L	60
61	W E Q A T G T G W M D L E A S L L P T G	80
81	P N A S N T S D G P D N L T S A G S P P	100
101	R T G S I S Y I N <u>I I M P S V E G T I C</u>	120
121	<u>I L L G I I G N S T V I F A V V K K S K L</u>	140
141	H W C N N V P D <u>I I I I I N L S V V D L L</u>	160
161	<u>F L L G M P F M I H Q L M G N G V W H F</u>	180
181	G E T M C T L I T A M D <u>A N S O F T S T</u>	200
201	<u>III Y I L T A M A I D R Y L A T V H P I S S</u>	220
221	T K F R K P S <u>V A T L V I C L L W A L S</u>	240
241	<u>IV F I S I T P V W L Y A R L I P F P G G A</u>	260
261	<u>V G C G I R L P N P D T D L Y W F T L Y</u>	280
281	<u>V Q E F L A F A L P F V V I T A A Y V R I</u>	300
301	L Q R M T S S V A P A S Q R S I R L R T	320
321	K R V <u>VI T P T A I A I C L V F F V C W A P</u>	340
341	<u>V Y V L O L T O L S I S R P T L T F V Y</u>	360
361	<u>VII L Y N A A I S L G Y A N S C L N P F V Y</u>	380
381	<u>I V L C E T F R K R L V L S V K P A A Q</u>	400
401	G Q L R A V S N A Q T A D E E R T E S K	420
421	G T	422

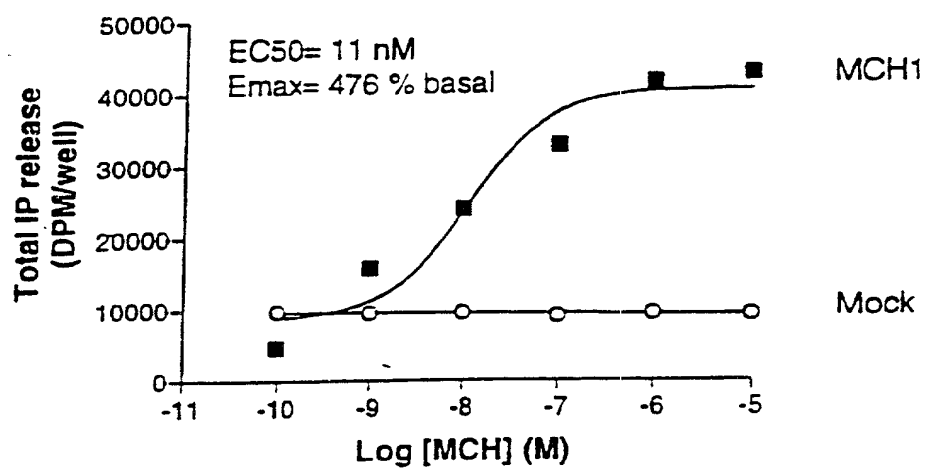
FIGURE 4

1 GCAGGGACCTGCACCGGCTGCATGGATCTGCAAAACCTCGTTGCTGTCCACTGGCCCCAA 60
 61 TGCCAGCAACATCTCGATGGCCAGGATAATCTCACATTGCCGGGTACCTCCTCGCAC 120
 121 AGGGAGTGTCTCTACATCAACATCATATATGCCCTCCGTGTTGGTACCATCTGTCTCCT 180
 181 GGGCATCGTGGGAACTCCACGGTCATCTTTGCTGTGGTGAAGAAGTCCAAGCTACACTG 240
 241 GTGCAGCAACGTCCCCGACATCTTCATCATCAACCTCTCTGTGGTGGATCTGCTTCTCT 300
 301 GCTGGGCATGCCCTTTCATGATCCACAGCTCATGGGAACGGCGTCTGGCACTTTGGGGA 360
 361 AACCATGTGCACCTCATCACAGCCATGGACGCCAACAGTCAGTTCAC TAGCACCTACAT 420
 421 CCTGACTGCCATGACCATTGACCGCTACTTGGCCACCGTCCACCCCATCTCCTCCACCAA 480
 481 GTTCCGGAAAGCCCTCCATGGCCACCCCTGGTGATCTGCCCTCCTGTGGGCGCTCTCCTTCAT 540
 541 CAGTATCACCCCTGTGTGGCTCTACGCCAGGCTCATTCCCTTCCCAGGGGTGCTGTGGG 600
 601 CTGTGGCATCCGCCCTGCCAAACCCGGACACTGACCTCTACTGGTTCACCTCTGTACCAGTT 660
 661 TTTCTTGGCCTTTGCCCTTCCGTTTGTGGTCATTACCGCCGCATACGTGAAATACTACA 720
 721 GCGCATGACGTCTTCGGTGGCCCCAGCCCTCCCAACGACAGCATCCGGCTTCGGACAAAGAG 780
 781 GGTGACCCCGCACGGCCATTGCCATCTGTCTGGTCTTCTTTGTGTGCTGGCACCCCTACTA 840
 841 TGTGCTGCAGCTGACCCAGCTGTCCATCAGCCGCCCGACCCCTCACGTTTGTCTACTTGT 900
 901 CAACGGGCCATCAGCTTGGGCTATGCTACAGCTGCCTGAACCCCTTTGTGTACATAGT 960
 961 GCTCTGTGAGACCTTTCGAAACGCTTGGTGTGTGTCAGTGAAGCCTGCAGCCCGGGGCA 1020
 1021 GCTCCGCACGGTCAGCAACGCTCAGACAGCTGATGAGGAGAGGACAGAAAGCAAAGGCAC 1080
 1081 CTGACAATTCCCCAGTCGCCCTCCAAGTCAGGCCACCCCATCAAACCGTGGGGAGAGATAC 1140
 1141 TGAGATTAAACCCCAAGGCTACCCCTGGGAGAAATGCAGAGGCTGGAGGCTGGGGGCTTGTAG 1200
 1201 CAACCACATTCCAC 1214

1	M	D	L	Q	T	S	L	L	S	T	G	P	N	A	S	N	I	S	G	20
21	Q	D	N	L	T	L	P	G	S	P	P	R	T	G	S	V	D	I	S	40
41	I	I	M	P	S	V	F	G	T	I	C	L	L	W	S	N	P	I	S	60
61	V	I	F	A	V	V	K	K	S	K	L	L	F	E	G	M	F	I	I	80
81	F	I	I	N	L	S	V	V	D	H	L	F	G	T	M	C	T	I	T	100
101	H	Q	L	M	G	N	G	Q	W	T	S	T	I	K	F	A	M	I	D	120
121	A	M	D	A	N	S	V	H	P	I	S	S	F	I	R	K	P	S	M	140
141	R	Y	L	A	T	C	L	P	A	G	L	S	F	I	S	I	T	P	W	160
161	T	L	V	I	C	I	L	P	G	L	S	A	V	I	G	I	R	F	L	180
181	Y	A	R	D	I	L	Y	W	F	T	V	K	R	Q	R	V	F	A	P	200
201	P	D	V	V	I	T	A	I	V	L	K	R	A	V	M	T	S	A	V	220
221	F	V	P	A	S	L	Q	V	R	F	L	K	R	V	L	R	T	I	A	240
241	P	A	C	I	S	V	F	F	I	V	C	T	P	Y	N	L	A	T	Q	260
261	I	S	I	S	R	P	C	L	N	K	R	A	V	Y	Q	T	S	F	R	280
281	S	I	A	N	S	L	V	E	E	R	A	S	E	I	G	G	E	N	A	300
301	Y	R	L	V	A	D	E	E	R	T	A	S	E	I	G	G	E	N	A	320
321	R	L	V	A	D	E	E	R	T	A	S	E	I	G	G	E	N	A	A	340
341	Q	T	A	D	E	E	R	T	A	S	E	I	G	G	E	N	A	A	A	354

FIGURE 6

IP release in MCH1- and
mock-transfected Cos-7 cells



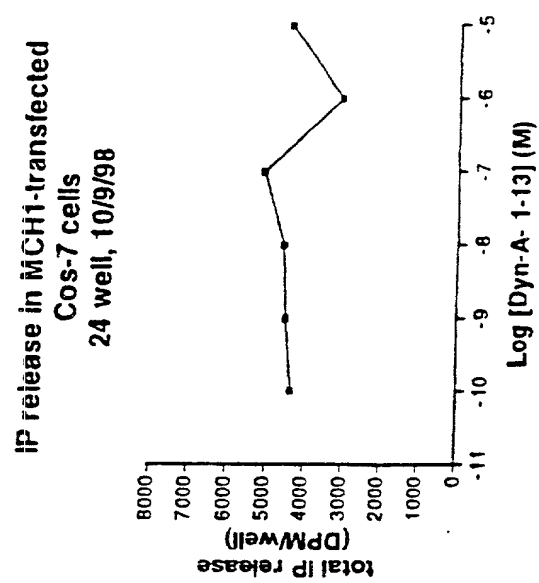
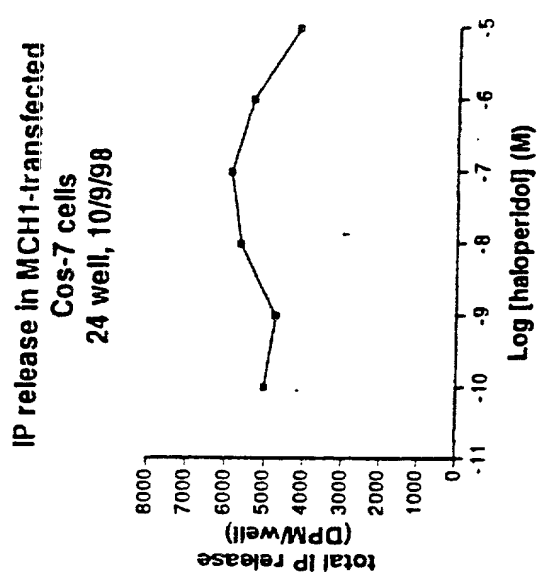
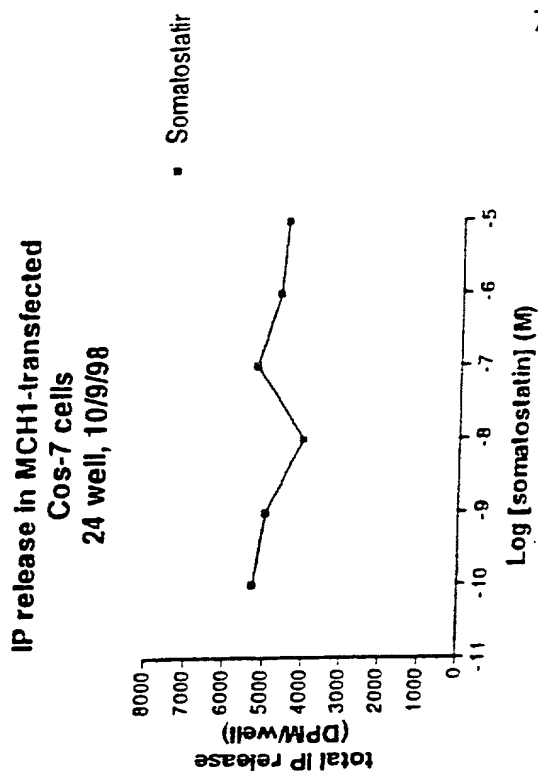
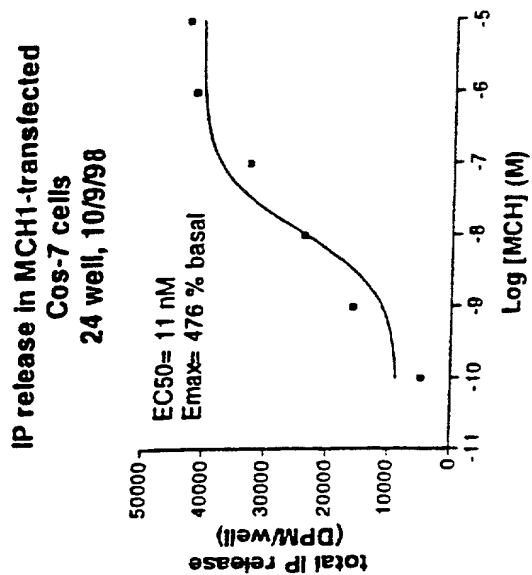


FIGURE 7

Microphysiometer Response CHO cells

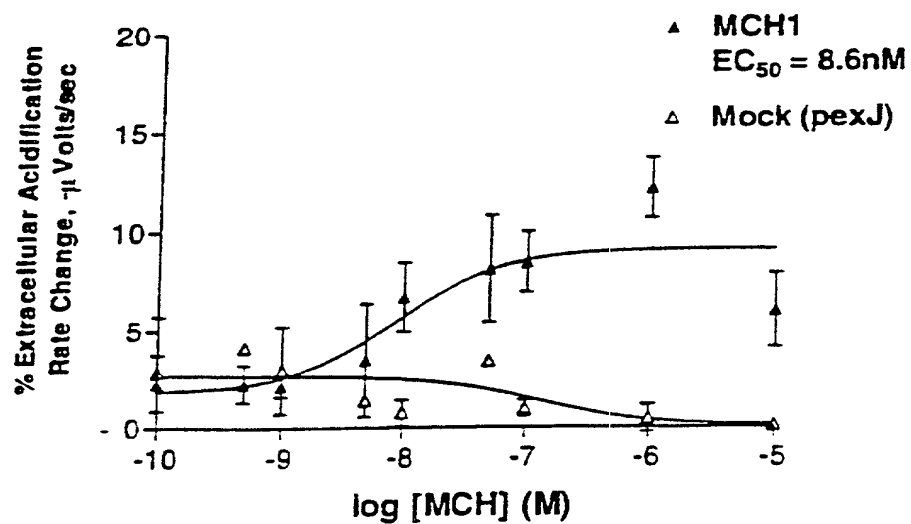
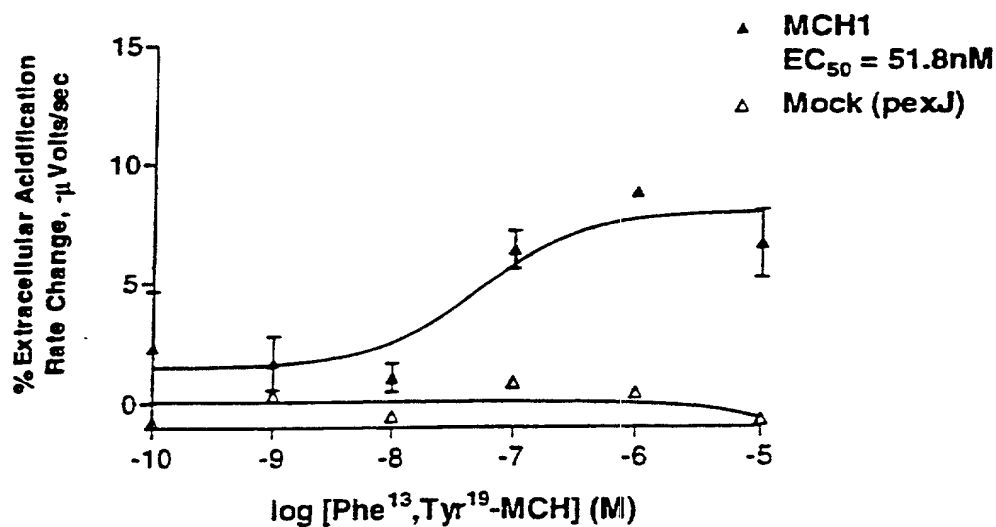


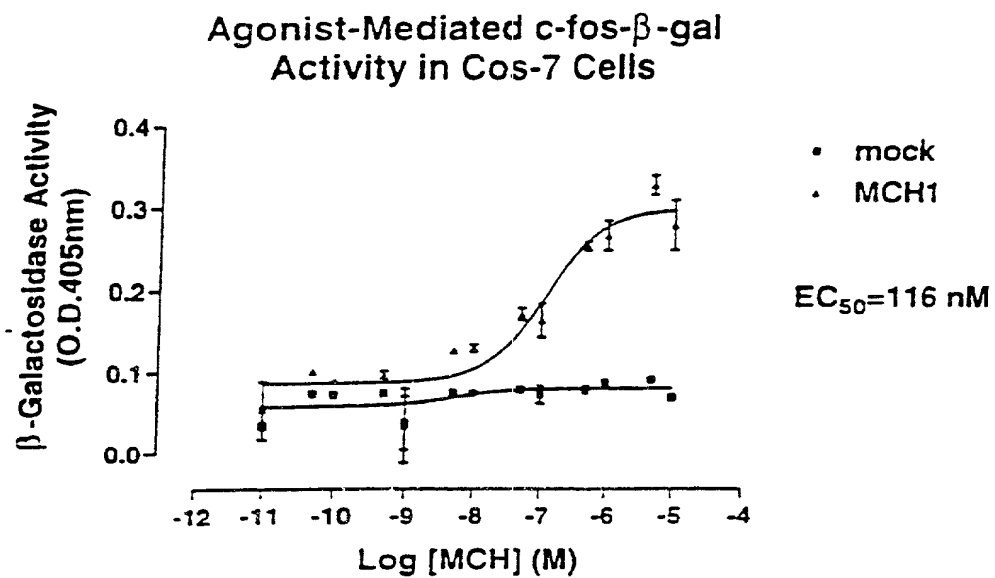
FIGURE 8

Microphysiometer Response CHO cells



9/15

FIGURE 9



10/15

FIGURE 10

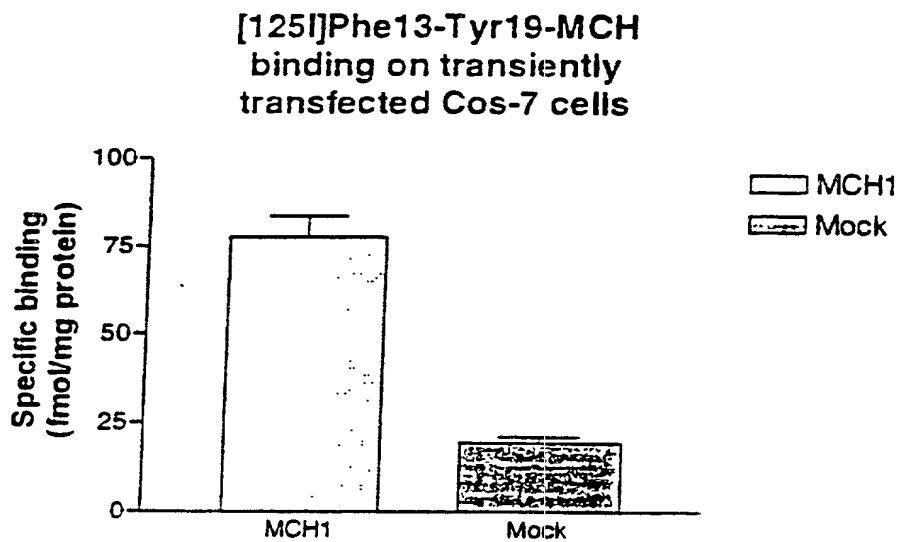
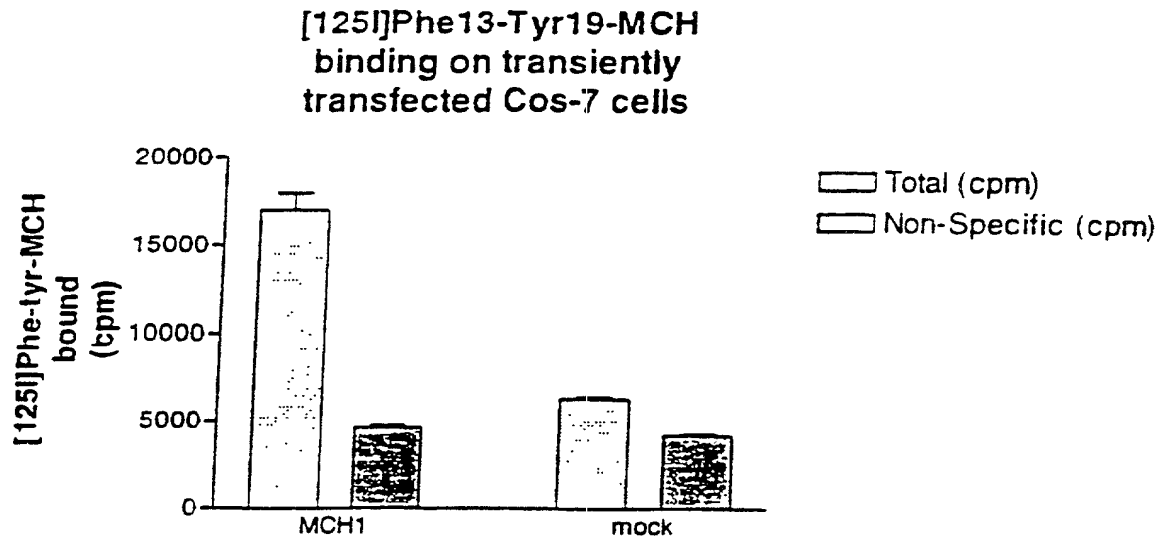
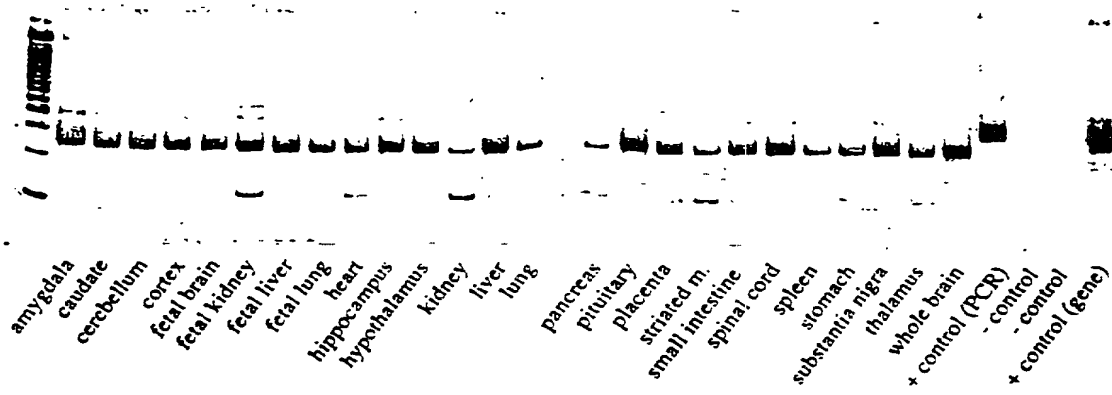


FIGURE 11



[illegible]

1	M	D	L	E	A	S	L	P	T	G	P	N	A	S	N	T	S	D	G	20
21	P	D	N	L	T	S	A	G	S	P	R	T	G	S	I	S	Y	I	N	40
41	I	I	M	P	S	V	F	G	T	I	C	L	L	G	I	I	G	N	S	60
61	V	I	F	A	V	V	K	K	S	K	L	H	W	C	N	N	V	P	D	80
81	F	I	I	N	L	S	V	V	D	L	L	F	L	L	G	M	P	F	M	100
101	H	Q	L	M	G	N	G	V	W	H	F	G	E	T	M	C	T	L	I	120
121	A	M	D	A	N	S	Q	F	T	S	T	Y	I	L	T	A	M	A	I	140
141	R	Y	L	A	T	V	H	P	I	S	S	T	K	F	R	K	P	S	V	160
161	T	L	V	I	C	L	L	W	A	L	S	F	I	S	I	T	P	V	W	180
181	Y	A	R	L	I	P	F	P	G	G	A	V	G	C	G	I	R	L	P	200
201	P	D	T	D	L	Y	W	F	T	L	Y	Q	F	F	L	A	F	A	L	220
221	F	V	V	I	T	A	A	Y	V	R	I	L	Q	R	M	T	S	S	V	240
241	P	A	S	Q	R	S	I	R	L	R	T	K	R	V	T	R	T	A	I	260
261	I	C	L	V	F	F	V	C	W	A	P	Y	Y	V	L	Q	L	T	Q	280
281	S	I	S	R	P	T	L	T	F	V	Y	L	Y	N	A	A	I	S	L	300
301	Y	A	N	S	C	L	N	P	F	V	Y	I	V	L	C	E	T	F	R	320
321	R	L	V	L	S	V	K	P	A	A	Q	G	Q	L	R	A	V	S	N	340
341	Q	T	A	D	E	E	R	T	E	S	K	G	T							353

Year	Total population		Male population		Female population		Total population		Male population		Female population	
	Population	Density	Population	Density	Population	Density	Population	Density	Population	Density	Population	Density
1950	1,000,000	100	500,000	50	500,000	50	1,000,000	100	500,000	50	500,000	50
1955	1,100,000	110	550,000	55	550,000	55	1,100,000	110	550,000	55	550,000	55
1960	1,200,000	120	600,000	60	600,000	60	1,200,000	120	600,000	60	600,000	60
1965	1,300,000	130	650,000	65	650,000	65	1,300,000	130	650,000	65	650,000	65
1970	1,400,000	140	700,000	70	700,000	70	1,400,000	140	700,000	70	700,000	70
1975	1,500,000	150	750,000	75	750,000	75	1,500,000	150	750,000	75	750,000	75
1980	1,600,000	160	800,000	80	800,000	80	1,600,000	160	800,000	80	800,000	80
1985	1,700,000	170	850,000	85	850,000	85	1,700,000	170	850,000	85	850,000	85
1990	1,800,000	180	900,000	90	900,000	90	1,800,000	180	900,000	90	900,000	90
1995	1,900,000	190	950,000	95	950,000	95	1,900,000	190	950,000	95	950,000	95
2000	2,000,000	200	1,000,000	100	1,000,000	100	2,000,000	200	1,000,000	100	1,000,000	100
2005	2,100,000	210	1,050,000	105	1,050,000	105	2,100,000	210	1,050,000	105	1,050,000	105
2010	2,200,000	220	1,100,000	110	1,100,000	110	2,200,000	220	1,100,000	110	1,100,000	110
2015	2,300,000	230	1,150,000	115	1,150,000	115	2,300,000	230	1,150,000	115	1,150,000	115
2020	2,400,000	240	1,200,000	120	1,200,000	120	2,400,000	240	1,200,000	120	1,200,000	120
2025	2,500,000	250	1,250,000	125	1,250,000	125	2,500,000	250	1,250,000	125	1,250,000	125
2030	2,600,000	260	1,300,000	130	1,300,000	130	2,600,000	260	1,300,000	130	1,300,000	130
2035	2,700,000	270	1,350,000	135	1,350,000	135	2,700,000	270	1,350,000	135	1,350,000	135
2040	2,800,000	280	1,400,000	140	1,400,000	140	2,800,000	280	1,400,000	140	1,400,000	140
2045	2,900,000	290	1,450,000	145	1,450,000	145	2,900,000	290	1,450,000	145	1,450,000	145
2050	3,000,000	300	1,500,000	150	1,500,000	150	3,000,000	300	1,500,000	150	1,500,000	150
2055	3,100,000	310	1,550,000	155	1,550,000	155	3,100,000	310	1,550,000	155	1,550,000	155
2060	3,200,000	320	1,600,000	160	1,600,000	160	3,200,000	320	1,600,000	160	1,600,000	160
2065	3,300,000	330	1,650,000	165	1,650,000	165	3,300,000	330	1,650,000	165	1,650,000	165
2070	3,400,000	340	1,700,000	170	1,700,000	170	3,400,000	340	1,700,000	170	1,700,000	170